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ABSTRACT

This document consists of a learning activity packet (LAP) for the student and an instructor's guide for the teacher. The LAP is intended to acquaint occupational home economics students with understanding and following the parts of a recipe, understanding and using common abbreviations used in recipes for weights and measures, and using the correct tools to weigh and measure foods properly. Illustrated information sheets and learning activities are provided on each of the following topics: recipes, techniques involved in weighing and measuring, weights and measures, and procedures for converting recipes. The instructor's guide begins with an instructional matrix in which the information sheets and written activities contained in the LAP and the written test items included in the instructor's guide are cross-referenced to the knowledge and skills objectives addressed by the materials. This is followed by a series of notes to instructors on the LAP series and related materials and suggested instructional procedures for use in conducting individual and group enrichment activities. A unit test and answer key are included. (MN)

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LEARNING ACTIVITY PACK

5.1b

SECTION 5

Reading and Converting Recipes/Weighing and Measuring

Basic Food Preparation

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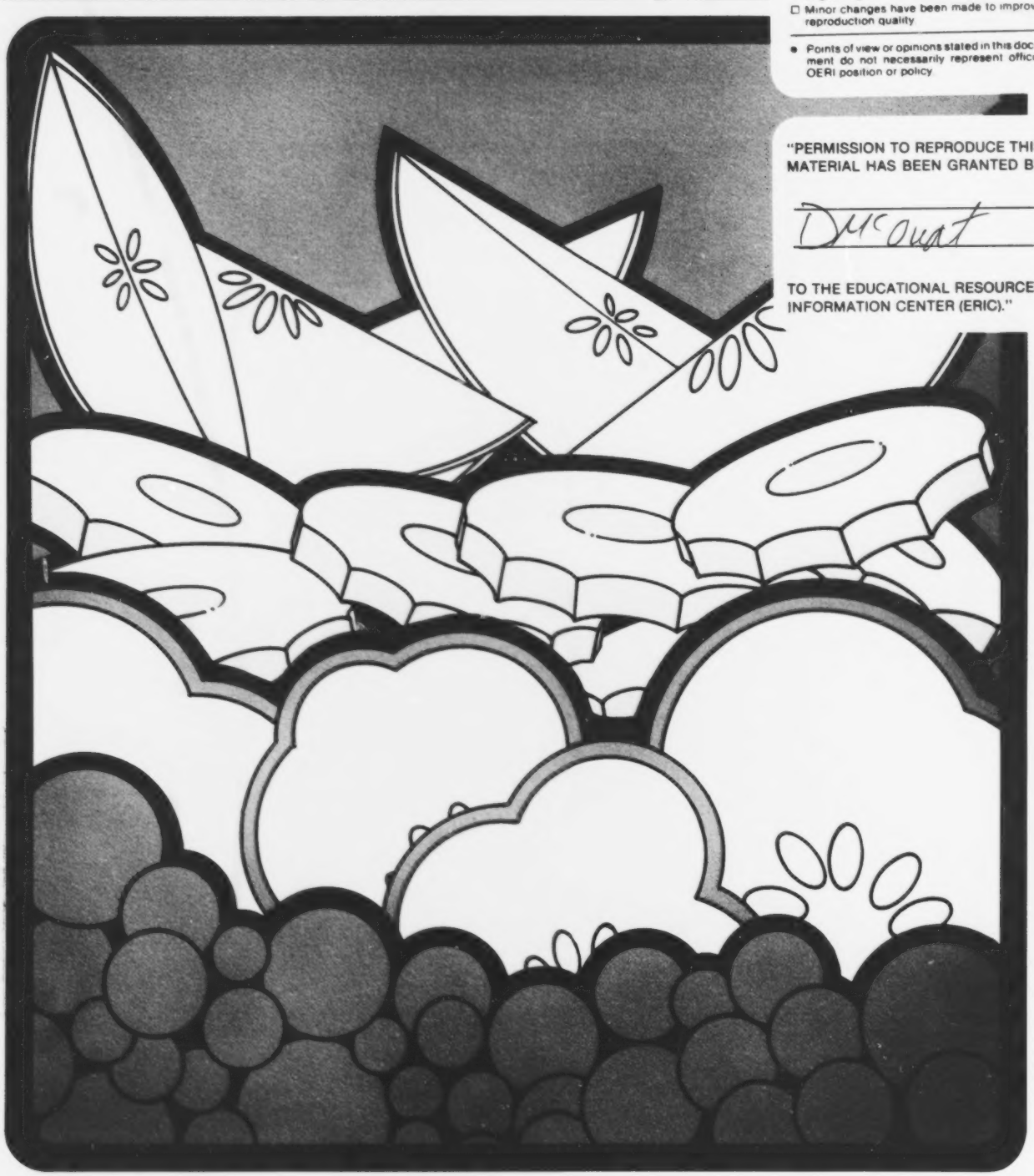

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LEARNING ACTIVITY PACK

5.1b

SECTION 5

Reading and Converting Recipes/Weighing and Measuring

Basic Food Preparation

State of Florida
Department of Education
Ralph D. Turlington, Commissioner of Education
Tallahassee, Florida
Affirmative action/equal opportunity employer

Division of Vocational, Adult, and Community Education

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Purpose and Contents

Purpose

The purpose of LAP 5.1b is to help you understand the parts of a recipe and how to follow it so that the food you prepare will turn out right. You will also learn the common abbreviations used in recipes for weights and measures, and how to weigh and measure ingredients with the correct tools. You will also learn how to convert recipes to make larger or smaller amounts of food.

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Introduction

Written Test

You will be able to pass the written test for LAP 5.1b when you can successfully complete the following:

1. Match a list of 11 vocabulary words with their definitions. (At least 10 out of 11 must be correct.)
2. Identify 7 parts of a recipe by matching the parts with descriptive phrases. (At least 6 out of 7 must be correct.)
3. Identify the correct order for following a recipe by rearranging the steps. (At least 14 out of 16 must be correct.)
4. Match various weights and measures with the correct abbreviations. (All 17 must be correct.)
5. Match weights and measures with their equivalents. (At least 8 out of 9 must be correct.)
6. Convert a recipe to *increase* the servings it yields. (*All* spaces must be filled in correctly.)
7. Convert a recipe to *decrease* the servings it yields. (*All* spaces must be filled in correctly.)

If you feel you know enough to pass the written test for LAP 5.1b before studying it, talk with your instructor.

Skills Test

You will be able to pass the skills test for LAP 5.1b when you complete the following successfully:

1. Weigh food accurately on a baker's scale.
2. Weigh food accurately on portion scales.
3. Measure solid ingredients accurately.
4. Measure liquid ingredients accurately.

REMEMBER . . . Your final performance will also be judged on how well you:

- organize your work area for efficient production before starting,
- follow the correct steps, in the right order, and
- clean your work area when you are finished.

If you feel you already know enough to pass the skills test for LAP 5.1b before practicing the skills, talk with your instructor.

Introduction (continued)

Learning Steps

To help you pass the written and skills tests for this LAP, you should follow these learning steps in order. **Written activities** will prepare you for the **written test.** They should all be done on a separate sheet of paper. The answers for these activities are in the back of this LAP. **Do not write in this LAP!**

1. Read and study **Information Sheet 1:** Vocabulary.
2. Complete **Activity 1:** Matching Vocabulary Words. Check your answers.
3. Read and study **Information Sheet 2:** Recipes.
4. Complete **Activity 2A:** Parts of a Recipe. Check your answers.
5. Complete **Activity 2B:** Following a Recipe. Check your answers.
6. Read and study **Information Sheet 3:** Weighing and Measuring.
7. Complete **Activity 3A:** Practice Checklist—Weighing Food Using a Baker's Scale.
8. Complete **Activity 3B:** Practice Checklist—Weighing Food Using a Portion-Control Scale.
9. Complete **Activity 3C:** Practice Checklist—Measuring Solid Ingredients.
10. Complete **Activity 3D:** Practice Checklist—Measuring Liquid Ingredients.
11. Read and study **Information Sheet 4:** Weights and Measures.
12. Complete **Activity 4A:** Matching Abbreviations. Check your answers.
13. Complete **Activity 4B:** Converting to Equivalent Weights and Measures. Check your answers.
14. Read and study **Information Sheet 5:** Converting Recipes.
15. Complete **Activity 5A:** Increase a Recipe. Check your answers.
16. Complete **Activity 5B:** Decrease a Recipe. Check your answers.
17. Get **Written Test 5.1b** from your instructor and complete it. If you are successful, go on to step 18; if not, talk with your instructor.
18. Have your instructor evaluate you on **Skills Test 5.1b**. If you are successful, you have completed this LAP; if not, talk with your instructor.

Information Sheet 1
Vocabulary

The following words are used in this LAP. Learning these words at the start will help you understand the instructions in recipes and the information in this LAP. Study this list, then check your understanding by doing Activity 1.

1. **standardized**—producing the same results over and over; made standard (comparable) in size, weight, quality, etc.
2. **abbreviation**—a short form of a written word used to save time and space (such as oz. for ounce)
3. **portion**—a serving of food of a standard size
4. **yield**—the number of portions (servings) to be expected from a recipe
5. **convert**—to change, increase, or decrease a recipe
6. **factor**—the amount by which you wish to convert a recipe (such as 2×, 3×, etc.)
7. **equivalent**—an equal amount, equal to
8. **measure**—to portion the amount of a food or an ingredient by volume (how much) using standard equipment; used for small amounts and liquids
9. **weigh**—to portion the amount of a food or an ingredient by weight (how heavy) using standard equipment; used for large amounts of dry ingredients and some liquids
10. **A.P. (as purchased)**—the physical appearance, weight, and quality of a food item at the time of purchase, before any preparations have taken place
11. **E.P. (edible portion)**—the part of meats, vegetables, or fruits left after shrinkage and waste in the preparation process

Activity 1
Matching Vocabulary Words

Directions

On a separate sheet of paper, write each vocabulary word and then write the correct definition chosen from the list below.

DO NOT WRITE IN THIS LAP

Vocabulary Words

1. **standardized** _____
2. **abbreviation** _____
3. **portion** _____
4. **yield** _____
5. **convert** _____
6. **factor** _____
7. **equivalent** _____
8. **measure** _____
9. **weigh** _____
10. **A.P.** _____
11. **E.P.** _____

Definitions

the number of portions to be expected from a recipe

an equal amount

to portion the amount of food by volume (how much) using standard equipment

the amount by which you wish to convert a recipe

to change, increase, or decrease a recipe

a serving of food of a standard size

a short form of a written word used to save time and space

to portion the amount of food by weight (how heavy) using standard equipment

something that has the same results over and over

the part of food remaining after shrinkage and waste in the preparation process

Activity 1 (continued)
Matching Vocabulary Words

food as it appears and weighs at the time of purchase, prior to preparation

Check your answers in the back of this LAP. If you missed any, review Information Sheet 1.

Information Sheet 2
Recipes

Standardized Recipes

A recipe tells you how to cook or prepare a certain food or beverage. A recipe tells how much of each ingredient to use and how to put them together. Recipes have been tested many times for accuracy and yield. When a recipe is followed carefully it will give good results each time. Recipes used in food service are standardized so that they will give the same number of servings and produce the same quality product every time. Standardization eliminates the chance of human error as much as possible and makes sure of the production of high-quality food each day. Each food-service business or food-service chain has selected a method of writing recipes so that all of the recipes for that business have the same format.

Parts of a Recipe

Though the parts may be arranged differently, a standardized recipe will usually have these parts: weights and measures, ingredients, directions for mixing, special equipment, method of cooking or preparing (including time and temperature), special instructions, and yield (may include portion size).

Gelatin

weights and measures	ingredients
1 3 oz. 1 c. 1 c.	package of gelatin boiling water cold water

Add boiling water to gelatin. Stir until dissolved. Add cold water.	directions for mixing
Place in gelatin mold or shallow pan.	special equipment
Chill in refrigerator until firm.	method of preparing or cooking
To remove gelatin, dip the mold into warm water and turn over onto serving dish.	special instructions
Makes 4 servings.	yield

Information Sheet 2 (continued)
Recipes

How to Follow a Recipe

1. Read the recipe all the way through carefully.
2. Convert the recipe (make it larger or smaller) if necessary. (You will learn how to convert recipes in Information Sheet 5 of this LAP.)
3. If using equipment that needs preheating (oven, grill, fryer, etc.), set it to the desired temperature.
4. Arrange all of the ingredients for efficient use.
5. Get all of the equipment and utensils needed for efficient preparation, including those indicated in the recipe, and others you will need to use to measure, mix, etc.
6. Weigh and measure all ingredients carefully.
7. Prepare ingredients as necessary, for example, dicing, cutting, melting, grinding.
8. Follow the mixing section of the recipe step by step as it is written.
9. When you have finished the mixing section, check to make sure you have used all of the ingredients and that you have mixed them correctly.
10. Do a taste test, that is, taste the food you've mixed. Make sure the seasonings and various ingredients are in proper proportion to each other. You should do this often while you cook. When raw meat is an ingredient in the recipe, you may cook a small sample to make a taste test. Do not taste uncooked meat.
11. Put the mixed ingredients into the pan or dish called for.
12. Follow the directions for cooking or preparing.
13. Set your timer, and check your product from time to time until its preparation is complete.
14. While you are waiting, put away the ingredients and clean the work space.
15. Follow the special instructions in the recipe for cooling, garnishing, portioning, and serving, etc.
16. Do another taste test before you serve the food. You want to send only appetizing food to the dining room.

Activity 2A
Parts of a Recipe

Directions **DO NOT WRITE IN THIS LAP**

Read the recipe below. **On a separate sheet of paper**, write the numbers 1 through 7. Match each recipe part with the correct word or phrase from the Word Bank.

Gelatin

1. _____ → 1 3 oz. / 1 c. / 1 c.

→ package of gelatin / boiling water / cold water → 2. _____

Add boiling water to gelatin.
Stir until dissolved.
Add cold water. → 3. _____

Place in gelatin mold or shallow pan. → 4. _____

Chill in refrigerator until firm. → 5. _____

To remove gelatin, dip the mold into warm water and turn over onto serving dish. → 6. _____

7. _____ → Makes 4 servings.

Word Bank

directions for mixing
special instructions
weights and measures
special equipment
factor
yield
portion
method of preparing or cooking
ingredients
equivalent

Check your answers in the back of the LAP. If you missed any, review Information Sheet 2.

Activity 2B
Following a Recipe

Directions

On a separate sheet of paper, rearrange this list of 16 steps in following a recipe. Write out each complete statement in the correct order from Step 1 through Step 16.

Steps:

Arrange all ingredients for efficient use.

Convert the recipe (make it larger or smaller) if necessary.

Do a taste test.

When you have finished the mixing section, check to make sure you have used all of the ingredients and that you have mixed them correctly.

Follow the mixing section of the recipe step by step as it is written.

Read the recipe all the way through carefully.

Do another taste test before you serve the food.

While you are waiting, put away your ingredients and clean your work space.

Follow the special instructions in the recipe for cooling, garnishing, portioning, or serving, etc.

Follow the directions for cooking or preparing.

Put the mixed ingredients into the pan or dish called for.

Weigh and measure all ingredients.

If using equipment that needs preheating, set it to the desired temperature.

Set your timer, and check your product from time to time until it is completed.

Get all of the equipment and utensils.

Prepare ingredients as necessary.

Check your answers in the back of this LAP. If you missed any, review Information Sheet 2.

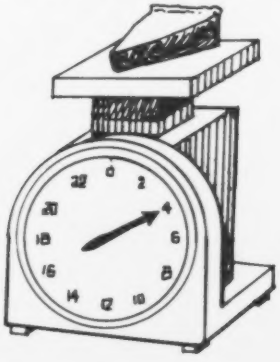
Information Sheet 3
Weighing and Measuring

Weighing Ingredients

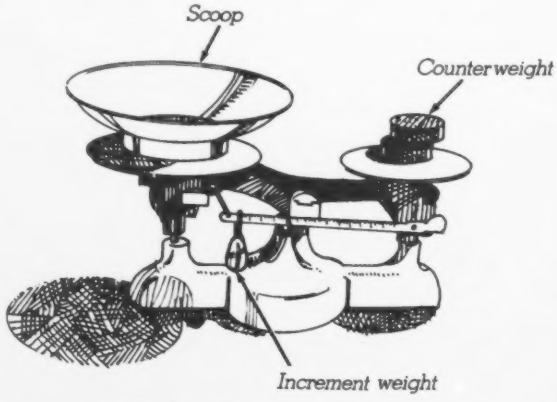
Scales

Two kinds of scales commonly used in commercial food establishments are the portion-control scale and the baker's scale.

The portion-control scale is used to weigh individual servings or ingredients. On this scale, the ingredient or prepared food to be weighed is placed on a scale pan and a movable pointer indicates the weight of the food.



Portion-control scale



Baker's scale

The baker's scale is a twin-platform device. The food or ingredient is placed in the pan on one platform, and a standardized metal counterweight is placed on the other platform.

In order to weigh food accurately, you must first balance the scale. Follow these steps:

1. Move the increment weight (the small weight built onto the scale, as shown in the illustration below) to zero.

2. Place a scoop or pan on the left platform. Place a counterweight on the right platform. The twin scales should be balanced.

3. To weigh pounds, add extra standard weights to the right platform. To weigh ounces, move the increment weight to the appropriate position.

4. Slowly add food or ingredient to the scoop or pan and continue until the scales are balanced once again.

Reliable, standardized weights and scales are required for accurate weighing.

Foods commonly weighed are dry ingredients for foods being prepared in larger amounts. The measurements are in pounds and ounces. Quantities of most dry ingredients are weights stated in "edible portions" (E.P.) or "as purchased" (A.P.). Weigh the prepared food or ingredients according to directions on the recipe and scales.

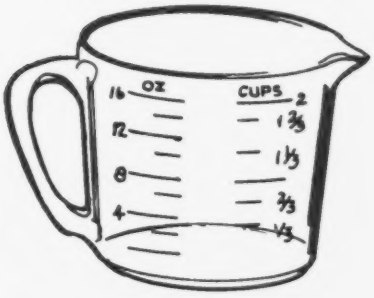
Information Sheet 3 (continued)
Weighing and Measuring

Measuring Cups

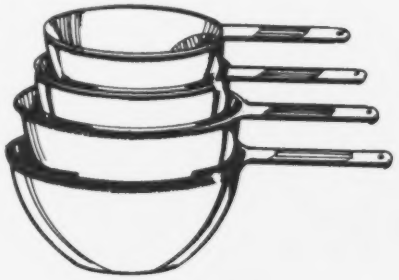
Measuring cups are available for either dry or liquid ingredients.

Graduated, dry measuring cups (made of stainless steel or aluminum) come in "nested" sets of four—1/4 cup, 1/3 cup, 1/2 cup, and 1 cup. These must be filled with the dry ingredients and leveled off with a flat, straight-edge knife or spatula.

Glass or clear plastic liquid measuring cups are found in one-cup and sometimes two-cup or four-cup sizes. The one-cup size has lines at 1/4, 1/3, and 1/2 cup intervals. To use these, place the cup on a level surface and read the top of the liquid at eye level.



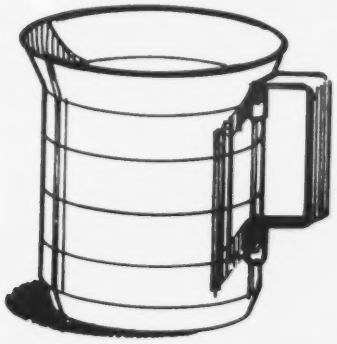
Liquid measuring cup



Nested dry measuring cups

Some types of measuring cups, usually metal, are used for both liquid and dry ingredients. Made with a side handle and divided into quarters, they have a lip for easy pouring and come in cup, pint, quart, and gallon sizes. To use, place volume measure on level surface and fill to desired level/line.

Use the largest appropriate measure for greater accuracy and efficiency. For example, use a pint measure once instead of using a one-cup measure twice.

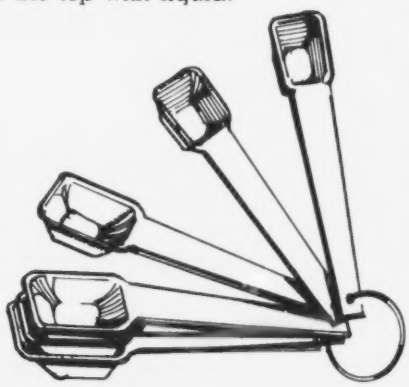


Liquid or dry measuring cup

Information Sheet 3 (continued)
Weighing and Measuring

Measuring Spoons

A set of graduated measuring spoons is used for measuring very small amounts of dry or liquid ingredients. Each spoon holds a standardized amount, such as 1/4 teaspoon, 1/3 teaspoon, 1/2 teaspoon, 1 teaspoon, or 1 tablespoon. Made from metal or plastic, these "nested" spoons may be leveled off for dry ingredients (with a flat, straight-edge knife or spatula) or filled to the top with liquid.



Nested measuring spoons

Foods commonly measured using cups or spoons:

- Liquid ingredients
- Some fruits and vegetables
- Small amounts of dry ingredients

Measuring tools come in the following sizes:

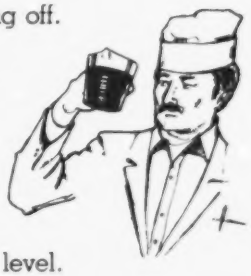
- Less than one teaspoon measures (1/4, 1/3, 1/2, etc.)
- One teaspoon measure
- One tablespoon measure
- Less than one cup measures—liquid and dry (1/4, 1/3, 1/2, etc.)
- One cup measure—liquid and dry
- Pint measure
- Quart measure
- Gallon measure

Information Sheet 3 (continued)
Weighing and Measuring

Techniques of Accurate Measuring

Solid Ingredients

- Heap measure with ingredient.
- Level off with flat, straight-edge knife or spatula.
- *Pack* brown sugar into cup before leveling off.



Liquid Ingredients

- Use largest appropriate measure.
- Place measure on flat, level surface.
- Pour ingredients into measure to desired level.
- On eye level, check for correct amount.

Scoops

Scoops are portion-control devices used for semi-solid foods such as ice cream, mashed potatoes, potato salad, and so on. It is important to level off the food in the scoop in order to make an accurate portion. Dip the scoop into the food, and then press the filled scoop firmly against the side of the bowl or container of food.

The size of a scoop is indicated by a number. This number tells how many scoops of each particular size are in a standard one-quart measure. The table below shows scoop equivalents.

Scoop Equivalents

Size	No. to the Quart	No. of Ounces
8	8	5
10	10	4
12	12	3
16	16	2–2 1/2
20	20	1 2/3
24	24	1 1/2
30	30	1 1/4
40	40	1

Information Sheet 3 (continued)
Weighing and Measuring

The number of a scoop is usually located on the release arm or on the tip of the handle.

Ladles

Ladles are long-handled utensils with bowls at the end. Ladles are useful in portioning liquids, such as soup, salad dressing, and gravies.

Ladles are marked according to the number of ounces each contains. There are one-ounce ladles, four-ounce ladles, and so on. The ounce-size of a ladle is marked on the handle.

Activity 3A

Practice Checklist:
Weighing Food Using a Baker's Scale

Directions

Write down the steps for this task **on a separate sheet of paper**. Then ask your instructor for the recipe, tools, equipment, and ingredients you will need to practice this skill. FOLLOW THE STEPS CAREFULLY. You may want to look at the information in this LAP to help you perform the task.

Steps

✔	
	1. Wash your hands.
	2. Organize your work area by assembling supplies: ingredients to weigh, empty scoop or container for ingredients, a baker's scale, and standard weights.
	3. Balance the scale by moving the increment weight to zero.
	4. Place the empty container on one platform and balance it with a counterweight on the other platform.
	5. To weigh pounds, add enough weights to total the exact amount called for.
	6. To weigh ounces, move the increment weight to the mark indicating the correct number of ounces.
	7. Add ingredients a little at a time until the scales are balanced to the desired weight.
	8. Do this for all ingredients that need to be weighed for the recipe. Keep the ingredients separate from each other after weighing.
	9. Clean and sanitize your work area, utensils, and equipment.

Standards for Evaluation

✔	
	Are all ingredients weighed exactly as called for in the recipe?

Activity 3B
Practice Checklist:
Weighing Food Using a Portion-Control Scale

Directions

Write down the steps for this task **on a separate sheet of paper**. Then ask your instructor for the recipe, tools, equipment, and ingredients you will need to practice this skill. FOLLOW THE STEPS CAREFULLY. You may want to look at the information in this LAP to help you perform the task.

Steps	✔
1. Wash your hands.	
2. Organize your work area by assembling supplies: food to weigh; an empty container, plate, or paper for food; a portion scale.	
3. Place the empty container, plate, or paper on the platform.	
4. Turn the dial back to 0.	
5. Place the food portions (in their containers, on their plates, or on paper) onto the platform.	
6. Remove or add food a little at the time until the needle indicates the correct weight. Keep weighed portions separate.	
7. Do this for all portions you are serving.	
8. Clean and sanitize your work area, utensils, and equipment.	

Standards for Evaluation	✔
Are all of the portions weighed according to the directions?	

Activity 3C
Practice Checklist:
Measuring Solid Ingredients

Directions

Write down the steps for this task **on a separate sheet of paper**. Then ask your instructor for the recipe, tools, equipment, and ingredients you will need to practice this skill. FOLLOW THE STEPS CAREFULLY. You may want to look at the information in this LAP to help you perform the task.

Steps	✔
1. Wash your hands.	
2. Organize your work area by assembling supplies: solid ingredients, a dry measure (cup or spoon), a knife or spatula.	
3. Sift ingredients if necessary (flour, etc.).	
4. Heap measure with ingredients.	
5. Pack ingredients down if necessary (brown sugar, etc.).	
6. Level off ingredients with flat edge of knife or spatula.	
7. Do this for all solid ingredients you need for the recipe. Keep measured ingredients separate from each other.	
8. Clean and sanitize your work area and utensils.	

Standards for Evaluation	✔
Are all ingredients measured in the correct amounts?	

Activity 3D
Practice Checklist:
Measuring Liquid Ingredients

Directions

Write down the steps for this task **on a separate sheet of paper**. Then ask your instructor for the recipe, tools, equipment, and ingredients you will need to practice this skill. FOLLOW THE STEPS CAREFULLY. You may want to look at the information in this LAP to help you perform the task.

Steps	✔
1. Wash your hands.	
2. Organize your work area by assembling supplies: liquid to be measured, a liquid measure (use largest appropriate cup or spoon).	
3. Place measure on flat, level surface.	
4. Pour ingredients into measure to desired level.	
5. If using a glass measure, check at eye level for correct amount.	
6. If using a metal measure, look from above to see if the liquid reaches correct mark on both sides.	
7. Do this for all liquid ingredients you need for the recipe. Keep measured ingredients separate from each other.	
8. Clean and sanitize your work area and utensils.	

Standards for Evaluation	✔
Are all ingredients measured in the correct amounts?	

Information Sheet 4
Weights and Measures

Abbreviations

Weighing and measuring terms are often abbreviated in recipes. Study this list of common abbreviations.

teaspoon = t. or tsp.
tablespoon = T. or Tbsp.
cup = c.
pint = pt.
quart = qt.
gallon = gal.
ounce = oz.
pound = lb. or #
peck = pk.
bushel = bu.
dozen = dz.
few grains = fg.
pinch = pch.
fluid ounce = fl. oz.
unit = un.

Note: Fluid ounces and weighed ounces are not the same. Check each recipe carefully to detemine whether you are to use fluid ounces or weighed ounces.

Equivalents

You can convert (change) from one measure to another. The following illustrations show *equivalent* measures and weights.

3 teaspoons = 1 tablespoon

3 t. = *1 T.*

16 tablespoons = one cup

16 T. = *1 c.*

Information Sheet 4 (continued)
Weights and Measures

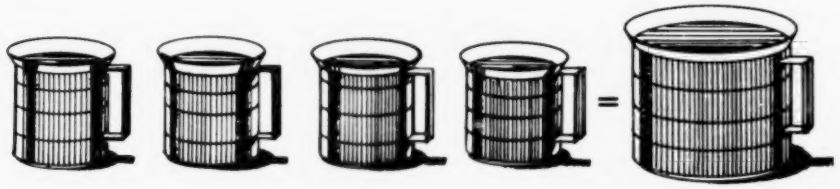
2 cups = 1 pint = 1/2 quart

1 c. + 1 c. = 1 pt. or 1/2 qt.

4 cups = 2 pints = 1 quart

1 c. + 1 c. + 1 c. + 1 c. = 2 pts. or 1 qt.

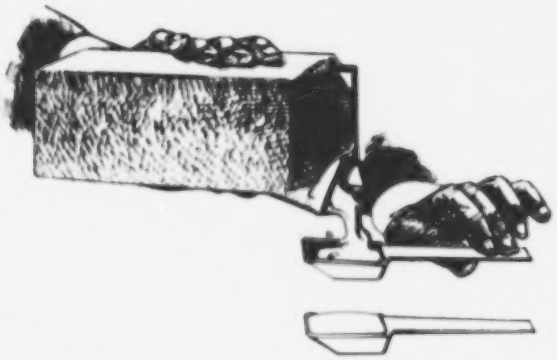
4 quarts = 1 gallon



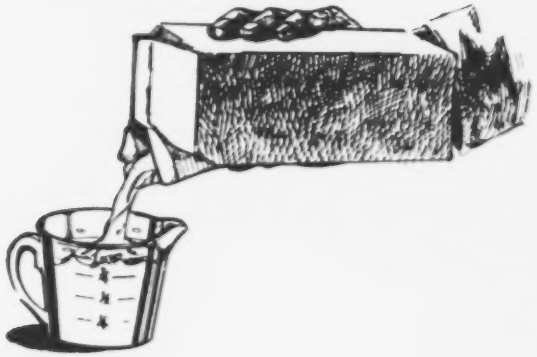
1 qt. + 1 qt. + 1 qt. + 1 qt. = 1 gal.

Information Sheet 4 (continued)
Weights and Measures

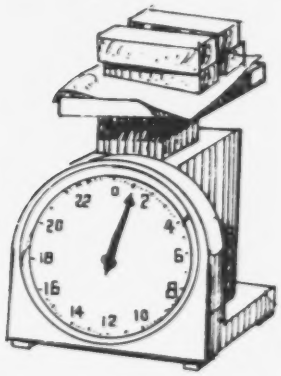
2 tablespoons = 1 fluid ounce



1 cup = 8 fluid ounces

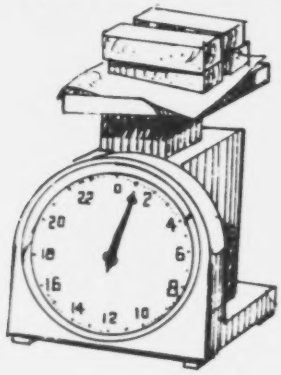


16 weighed ounces = 1 pound



Information Sheet 4 (continued)
Weights and Measures

Four 4-ounce sticks of butter = 1 pound



There are conversion tables to help you change weights to measures or measures to weights. For example, you would use a conversion table to find out the cup equivalent of a pound of butter.

Information Sheet 4 (continued)
Weights and Measures

Common Can Sizes

Approximately 3/4 cup
(6 fl. oz.)

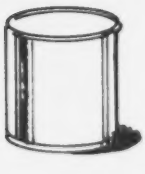
Used for frozen concentrated juices and individual servings of juice

Approximately 1 cup
(7 3/4 fl. oz.)

Used for some fruits, vegetables, and specialty items

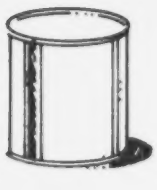
#1 (Picnic)
Approximately 1 1/4 cups
10 1/2 oz.
(9 1/2 fl. oz.)

Used for condensed soups, some fruits, vegetables, meat, and fish products



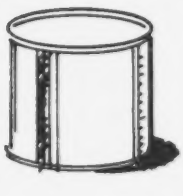
#300
Approximately 1 3/4 cups
15 1/2 oz.
(13 1/2 fl. oz.)

Used for specialty items and a variety of fruits, including cranberry sauce



#303
Approximately 2 cups
1 lb.
(15 fl. oz.)

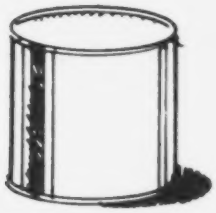
Used extensively for vegetables and some fruits



#2
Approximately 2 1/2 cups
1 lb. 4 oz.
(1 pt. 2 fl. oz.)

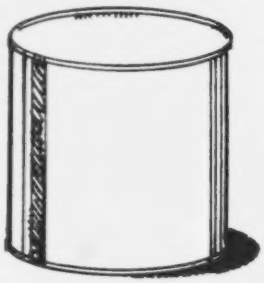
Used for vegetables, many fruits, and juices

Information Sheet 4 (continued)
Weights and Measures



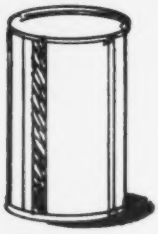
#2-1/2
Approximately 3 1/2 cups
1 lb. 13 oz.
(1 pt. 10 fl. oz.)

Used principally for fruits and some vegetables



#10
Approximately 12 cups
6 lb. 9 oz.
(3 pts.)

The "institutional" or "restaurant" size container used for most fruits and vegetables; not ordinarily available in retail stores



#5
Approximately 5 3/4 cups
(1 qt. 14 fl. oz.)

Activity 4A
Matching Abbreviations

Directions

On a separate sheet of paper, copy this list of abbreviations. Then write the correct weight or measure for each abbreviation from the word bank below. You will need to use some weights and measures more than once.

DO NOT WRITE IN THIS LAP

_____	= oz.	_____	= pt.
_____	= lb.	_____	= gal.
_____	= qt.	_____	= fg.
_____	= c.	_____	= bu.
_____	= T.	_____	= #
_____	= pch.	_____	= tsp.
_____	= dz.	_____	= pk.
_____	= Tbsp.	_____	= fl. oz.
_____	= t.	_____	= un.

Word Bank

dozen
pound
teaspoon
peck
pint
pinch
tablespoon
cup
few grains
quart
bushel
ounce
gallon
fluid ounce
unit

Check your answers in the back of this LAP. If you missed any, review Information Sheet 4.

Activity 4B
Converting to Equivalent Weights and Measures

Directions

On a separate sheet of paper, write each weight or measure. From the list below, choose the correct equivalent to write beside each weight or measure.

DO NOT WRITE IN THIS LAP

Weights and Measures

_____ = 1 tablespoon

_____ = 1 cup

_____ = 1 pint

_____ = 1 quart

_____ = 1 gallon

_____ = 1 fluid ounce

_____ = 1 cup (liquid)

_____ = 1 pound

_____ = 1 pound (butter)

Equivalents (There are more equivalents than measures; use only one for each.)

3 pints
3 quarts
2 tablespoons
18 weighed ounces
2 pints
8 fluid ounces
3 teaspoons
2 teaspoons
10 tablespoons
4 4-ounce sticks
16 weighed ounces
6 sticks
18 fluid ounces
3 tablespoons
4 quarts
3 cups
2 cups
16 tablespoons

Check your answers in the back of this LAP. If you missed any, review Information Sheet 4.

Information Sheet 5
Converting Recipes

Most standardized recipes used in commercial food service will yield 25, 50, or more portions or servings. Sometimes you will need to prepare fewer servings or more servings than the recipe yields. To do this, you must change the recipe to the yield you want. When you change or convert a recipe, you change the quantity of *each* ingredient. You either decrease or increase it by the *same amount* you wish to increase or decrease the yield. This amount is called the factor.

Converting a recipe does not change the method of preparation.

Remember, the number of portions in the recipe before you change it will always equal 1.0; if you increase the recipe the factor has to be larger than 1.0; if you decrease the recipe the factor has to be less than 1.0.

Increase a Recipe

1. **Calculate the factor.**
   Divide the number of servings you want by the yield listed in the recipe.

   The yield is 50 (50 = 1.0).
   You wish to serve 70 (increase the yield).
   The factor of increase is 1.40 (more than 1.0).

   ```
        1.40
   50 | 70.00
        50
        200
        200
          0
   ```

2. **Convert weights and measures.**
   Change (convert) all of the weights and measures to equivalents in ounces and tablespoons.

   Remember: 1 lb. = 16 oz. 1 cup = 16 Tbsp.

   The recipe calls for 2 pounds of flour.

   ```
     16 (oz./lb.)
   × 2 (lbs.)
     32 (oz.)
   ```

   The equivalent of 2 pounds of flour is 32 ounces of flour.

   Ingredients not measured in ounces or tablespoons, like eggs or fruit, keep their same unit of measurement.

Information Sheet 5 (continued)
Converting Recipes

3. **Multiply the factor by the unit of measurement or weight.**

   The factor of increase is 1.40 (Step 1 on preceding page).
   The converted measurement of flour is 32 ounces (Step 2 on preceding page).
   Multiply the factor by the measurement.

```
  1.40 (factor of increase)
 ×32 (converted measurement)
  280
 420
44.80 (ounces)
```

   The amount of flour needed is 44.8 oz.

4. **Reconvert weights and measures.**
   Change (convert) all of the weights and measures *back* to larger units (pounds and cups). This step is explained in more detail under **The Converted Recipe** (see page 31).

Decrease a Recipe

1. **Calculate the factor.**
   Divide the number of servings you want by the yield listed in the recipe.

   The yield is 50 (50 = 1.0).
   You wish to serve 20 (decrease the yield).
   The factor of decrease is .40 (less than 1.0).

```
   .40
50 | 20.00
    200
      00
```

2. **Convert weights and measures.**
   Change (convert) all of the weights and measures to equivalents in ounces and tablespoons.

   Remember: 1 lb. = 16 oz. 1 cup = 16 Tbsp.

   The recipe calls for 2 pounds of flour.

```
 16 (oz./lb.)
×  2 (lbs.)
 32 (oz.)
```

   The equivalent of 2 pounds of flour is 32 ounces of flour.

   Ingredients not measured in ounces or tablespoons, like eggs or fruit, keep their same unit of measurement.

Information Sheet 5 (continued)
Converting Recipes

3. **Multiply the factor by the unit of weight or measurement.**

The factor of decrease is .40 (Step 1 on previous page). The converted measurement of flour is 32 ounces (Step 2 on previous page). Multiply the factor by the measurement.

.40 (factor of decrease)
× 32 (converted measurement)
.80
120
12.80 (oz.)

The amount of flour needed is 12.8 oz.

4. **Reconvert weights and measures**
Change (convert) all of the weights and measures *back* to larger units (pounds and cups). This step is explained in more detail under **The Converted Recipe**.

The Converted Recipe

When you follow the steps for increasing or decreasing a recipe, you end with large numbers of ounces and tablespoons. To make the recipe easy to follow, you need to convert the ounces and tablespoons *back* to larger measurements and to change decimals to usable fractions.

Look back at Step 3 under *Increase a Recipe*. The total amount of flour required was 44.8 oz. When the amount is *more than* 16 oz. (or 16 Tbsp.), follow these steps to reconvert the amount to pounds (or cups):

1. Divide the total by 16.

2.8
16 ⟌ 44.8
32
128
128
0

Dividing the total by 16 gives an answer of 2.8. The whole number indicates the change from ounces to pounds (or from tablespoons to cups).

2. Multiply the remaining decimal figure by 16.

.8
×16
12.8

Multiplying the decimal .8 by 16 indicates the remaining ounces (or tablespoons). The whole number indicates whole ounces (or tablespoons). The decimal figure indicates a fraction of an ounce (or tablespoon).

Information Sheet 5 (continued)
Converting Recipes

3. Convert the decimal figure to a usable fraction. Use this chart for converting decimal figures into fractions of an ounce (or tablespoon).

If the decimal figure is	**use this fraction**	**of measurement**
.00-.09	0	ounce/tablespoon
.10-.29	1/4	ounce/tablespoon
.30-.59	1/2	ounce/tablespoon
.60-.79	3/4	ounce/tablespoon
.80-.99	1	ounce/tablespoon

Converting the decimal figure .8 by using the chart gives an answer of 1 whole ounce.

4. Add the results from Steps 1, 2, and 3.
   2 lbs. + 12 oz. + 1 oz. = 2 lbs. 13 oz.

Look back at Step 3 under *Decrease a Recipe*. The total amount of flour required was 12.8 oz. When the amount is *less than* 16 oz. (or 16 Tbsp.) or when ingredients are not measured in pounds or cups (for example, eggs), follow these steps:

1. Use the whole number to indicate the number of ounces, tablespoons, or units.

2. Convert the decimal figure to a usable fraction, using the same conversion chart above.
   Converting the decimal figure .8 by using the chart gives an answer of 1 whole ounce.

3. Add the results of Steps 1 and 2.
   12 oz. + 1 oz. = 13 oz.

Tablespoons should be converted into fractions of a cup for more accurate measuring. This chart shows equivalent measurements:

Number of tablespoons	=	Fraction of cup
4 Tbsp.	=	1/4 cup
8 Tbsp.	=	1/2 c.
12 Tbsp.	=	3/4 c.

If an ingredient cannot be divided into fractional parts (for example, eggs), round decimal figures of less than .5 to the next lower whole number. Round decimal figures of .5 and above to the next higher whole number.

Example:
4.25 eggs = 4 whole eggs
4.75 eggs = 5 whole eggs
4.50 eggs = 5 whole eggs

Activity 5A
Increase a Recipe

Directions

On a separate sheet of paper, copy the chart below. Calculate the correct amounts and fill in the spaces.

1. Find the factor of increase.
2. Change all recipe measurements to equivalents in ounces, tablespoons, or units.
3. Convert the amount of ingredients for 50 into the amount for 80.
4. Change all recipe measurements in tablespoons, ounces, or units back into cups and pounds for a recipe for 80 servings.

Meat Loaf
(Yield 50)

Factor of Increase:

Ingredients	Recipe for 50 Servings	Equivalents oz./Tbsp./un.	Converted to 80 Servings	Recipe for 80 Servings
Bread	1 lb.			
Milk	3 c.			
Onion, chopped	1 c.			
Celery, chopped	1 c.			
Ground beef	8 lbs.			
Salt	1 1/2 Tbsp.			
Worcestershire sauce	2 Tbsp.			
Parsley, chopped	1/4 c.			
Eggs	7 eggs			

Check your answers in the back of this LAP. If you missed any, review Information Sheet 5.

Activity 5B
Decrease a Recipe

Directions

On a separate sheet of paper, copy the chart below. Calculate the correct amounts and fill in the spaces.

1. Find the factor of decrease.
2. Change all recipe measurements to equivalents in ounces, tablespoons, or units.
3. Convert the amount of ingredients for 50 into the amount for 30.
4. Change all recipe measurements in tablespoons, ounces, or units back into cups and pounds for a recipe for 30 servings.

DO NOT WRITE IN THIS LAP

Meat Loaf
(Yield 50)

Factor of Decrease:

Ingredients	Recipe for 50 Servings	Equivalents oz./Tbsp./un.	Converted to 30 Servings	Recipe for 30 Servings
Bread	1 lb.			
Milk	3 c.			
Onion, chopped	1 c.			
Celery, chopped	1 c.			
Ground beef	8 lbs.			
Salt	1 1/2 Tbsp.			
Worcestershire sauce	2 Tbsp.			
Parsley, chopped	1/4 c.			
Eggs	7 eggs			

Check your answers in the back of this LAP. If you missed any, review Information Sheet 5.

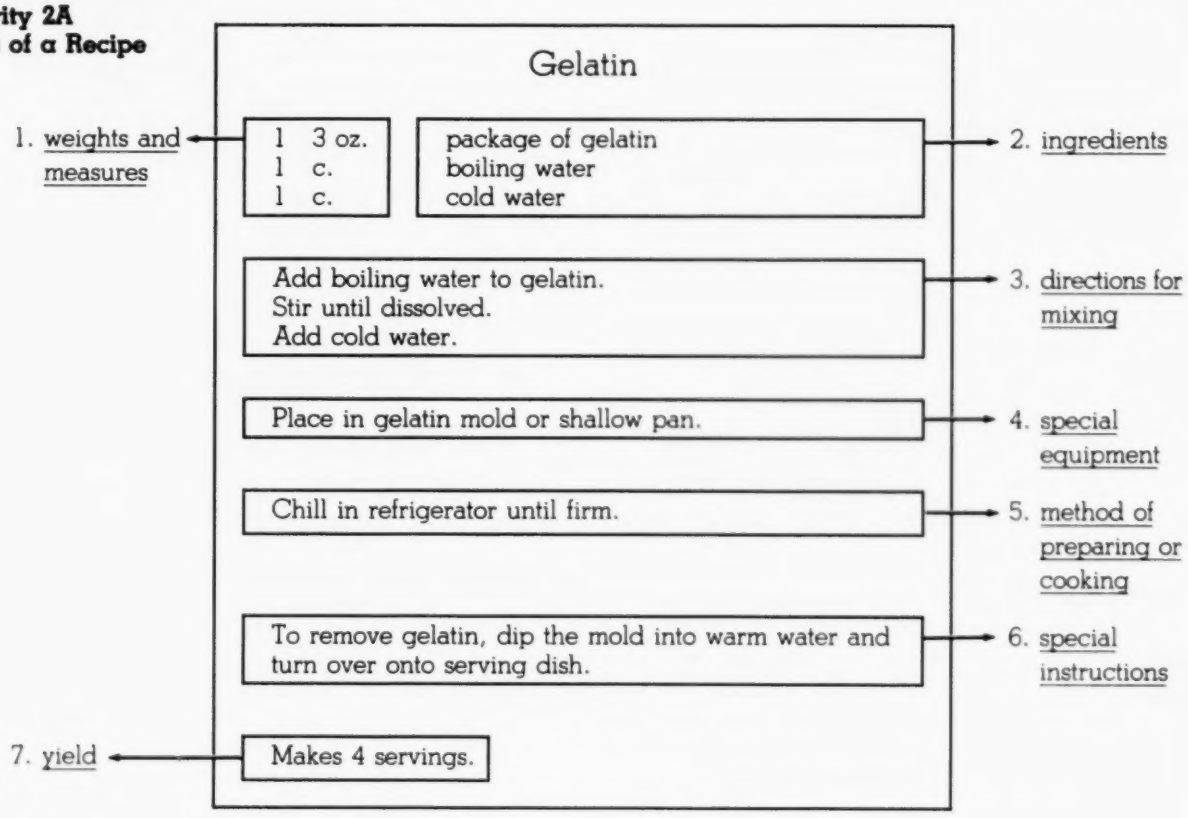
Answer Keys for Written Activities

Activity 1
Matching Vocabulary Words

1. **standardized**—something that has the same results over and over
2. **abbreviation**—a shortened form of a written word used to save time and space
3. **portion**—a serving of food of a standard size
4. **yield**—the number of portions to be expected from a recipe
5. **convert**—to change, increase, or decrease a recipe
6. **factor**—the amount by which you wish to convert a recipe
7. **equivalent**—an equal amount
8. **measure**—to portion the amount of a food by volume (how much) using standard equipment
9. **weigh**—to portion the amount of food by weight (how heavy) using standard equipment
10. **A.P.**—food as it appears and weighs at the time of purchase, prior to preparation
11. **E.P.**—the part of food remaining after shrinkage and waste in the preparation process

Answer Keys for Written Activities (continued)

Activity 2A
Parts of a Recipe



Answer Keys for Written Activities (continued)

Activity 2B
Following a Recipe

How to Follow a Recipe

1. Read the recipe all the way through carefully.
2. Convert the recipe if necessary.
3. If using equipment that needs preheating, set it to the desired temperature.
4. Assemble all ingredients.
5. Assemble all equipment and utensils.
6. Weigh and measure all ingredients carefully.
7. Prepare all ingredients as necessary.
8. Follow the mixing section of the recipe step by step as it is written.
9. When you have completed the mixing section, check to make sure you have used all of the ingredients and that you have mixed them correctly.
10. Do a taste test.
11. Put the mixed ingredients into the pan or dish called for.
12. Follow the directions for cooking or preparing.
13. Set your timer, and check your product from time to time until it is completed.
14. While you are waiting, put away your ingredients and clean your work space.
15. Follow the special instructions in the recipe for cooling, garnishing, portioning, and serving, etc.
16. Do another taste test before you serve the food.

Answer Keys for Written Activities (continued)

Activity 4A
Matching Abbreviations

ounce	=	oz.	pint	=	pt.
pound	=	lb.	gallon	=	gal.
quart	=	qt.	few grains	=	fg.
cup	=	c.	bushel	=	bu.
tablespoon	=	T.	pound	=	#
pinch	=	pch.	teaspoon	=	tsp.
dozen	=	dz.	peck	=	pk.
tablespoon	=	Tbsp.	fluid ounces	=	fl.oz.
teaspoon	=	t.	unit	=	un.

Activity 4B
Converting to Equivalent
Weights and Measures

3 teaspoons	=	1 tablespoon
16 tablespoons	=	1 cup
2 cups	=	1 pint
2 pints	=	1 quart
4 quarts	=	1 gallon
2 tablespoons	=	1 fluid ounce
8 fluid ounces	=	1 cup (liquid)
16 weighed ounces	=	1 pound
4 4-ounce sticks	=	1 pound (butter)

Answer Keys for Written Activities (continued)

Activity 5A
Increase a Recipe

Meat Loaf
(Yield 50)

Factor of Increase: 1.60

Ingredients	Recipe for 50 Servings	Equivalents oz./Tbsp./un.	Converted to 80 Servings	Recipe for 80 Servings
Bread	1 lb.	16 oz.	25.6 oz.	1 lb. 9 3/4 oz.
Milk	3 c.	48 Tbsp.	76.8 Tbsp.	4 c. 13 Tbsp.
Onion, chopped	1 c.	16 Tbsp.	25.6 Tbsp.	1 1/2 c. 1 3/4 Tbsp.
Celery, chopped	1 c.	16 Tbsp.	25.6 Tbsp.	1 1/2 c. 1 3/4 Tbsp.
Ground beef	8 lbs.	128 oz.	204.8 oz.	12 lbs. 13 oz.
Salt	1 1/2 Tbsp.	1 1/2 Tbsp.	2.4 Tbsp.	2 1/2 Tbsp.
Worcestershire sauce	2 Tbsp.	2 Tbsp.	3.2 Tbsp.	3 1/4 Tbsp.
Parsley, chopped	1/4 c.	4 Tbsp.	6.4 Tbsp.	6 1/2 Tbsp.
Eggs	7 eggs	7 eggs	11.2 eggs	11 eggs

Answer Keys for Written Activities (continued)

Activity 5B
Decrease a Recipe

Meat Loaf
(Yield 50)

Factor of decrease: .60

Ingredients	Recipe for 50 Servings	Equivalents oz./Tbsp./un.	Converted to 30 Servings	Recipe for 30 Servings
Bread	1 lb.	16 oz.	9.6 oz.	9 3/4 oz.
Milk	3 c.	48 Tbsp.	28.8 Tbsp.	1 3/4 c. 1 Tbsp.
Onion, chopped	1 c.	16 Tbsp.	9.6 Tbsp.	1/2 c. 2 Tbsp.
Celery, chopped	1 c.	16 Tbsp.	9.6 Tbsp.	1/2 c. 2 Tbsp.
Ground beef	8 lbs.	128 oz.	76.8 oz.	4 lbs. 13 oz.
Salt	1 1/2 Tbsp.	1 1/2 Tbsp.	.9 Tbsp.	1 Tbsp.
Worcestershire sauce	2 Tbsp.	2 Tbsp.	1.2 Tbsp.	1 1/4 Tbsp.
Parsley, chopped	1/4 c.	4 Tbsp.	2.4 Tbsp.	1 1/2 Tbsp.
Eggs	7 eggs	7 eggs	4.2 eggs	4 eggs

State of Florida
Department of Education
Ralph D. Turlington, Commissioner of Education
Tallahassee, Florida
Affirmative action/equal opportunity employer

Division of Vocational, Adult, and Community Education

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INSTRUCTOR'S GUIDE
LAP
5.1b

Reading and Converting Recipes/Weighing and Measuring

Basic Food Preparation

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INSTRUCTOR'S GUIDE
LAP
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Basic Food Preparation

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These materials are endorsed for use in training commercial foods and culinary arts workers by the **Florida Restaurant Association's Education Foundation.**

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Instructional Matrix

Directions If you want to use only part of the materials in this LAP, use this matrix to help you select what you need.

Objectives	Instructional Materials	Practice and Feedback	Evaluation
Knowledge Objectives	**Information Sheets**	**Written Activities**	**Written Test Items**
1. Match vocabulary words with their definitions. (At least 10 out of 11 must be correct.)	1: Vocabulary	1: Matching Vocabulary Words	Part I: 1-11
2. Identify parts of a recipe by labeling a recipe with matching phrases. (At least 6 out of 7 must be correct.)	2: Recipes	2A: Parts of a Recipe	Part II: 1-7
3. Identify the correct order for following a recipe by rearranging the steps. (At least 14 out of 16 must be correct.)	2: Recipes	2B: Following a Recipe	Part III: 1-16
4. Match various weights and measures with the correct abbreviations. (All 17 must be correct.)	4: Weights and Measures	4A: Abbreviations	Part IV: 1-17
5. Match weights and measures with their equivalents. (At least 8 out of 9 must be correct.)	4: Weights and Measures	4B: Equivalents	Part V: 1-9
6. Convert a recipe to *increase* the number of servings it yields. (All spaces must be filled in correctly.)	5: Converting Recipes	5A: Increase a Recipe	Part VI
7. Convert a recipe to *decrease* the number of servings it yields. (All spaces must be filled in correctly.)	5: Converting Recipes	5B: Decrease a Recipe	Part VII

Instructional Matrix (continued)

Objectives	Instructional Materials	Practice and Feedback	Evaluation
Skill Objectives	**Information Sheets**	**Practice Checklists**	**Skills Test Items**
1. Weigh food accurately on a baker's scale.	3: Weighing and Measuring	3A: Weighing Food Using a Baker's Scale	Part I
2. Weigh food accurately on portion-control scale.	3: Weighing and Measuring	3B: Weighing Food Using a Portion-Control Scale.	Part II
3. Measure solid ingredients accurately.	3: Weighing and Measuring	3C: Measuring Food/Solid Ingredients	Part III
4. Measure liquid ingredients accurately.	3: Weighing and Measuring	3D: Measuring Food/Liquid Ingredients	Part IV

Notes to the Instructor

General Notes

This is the second of two LAPs in 5.1, Interpreting and Converting Recipes. These two LAPs can be used in either order.

OPPS

The materials in this LAP cover the following Florida **OPPS** (Occupational Proficiency Performance Standards): Convert recipes of varying quantities of food.

V-TECS

The materials in this LAP do not cover any of the areas in the Florida/**V-TECS** (Vocational-Technical Education Consortium of States) Commercial Cook catalog.

Career MAP

The materials in this LAP do not cover any of the areas in the Career MAP (Career *M*erit *A*chievement *P*lan).

Special Needs

The following materials can be used for students who are educable mentally retarded/handicapped (EMR/EMH) or academically disadvantaged as an alternative to or in addition to this LAP:

Series: Career Related Instruction (CRI)

Occupational Cluster: Food Preparation and Service

Titles: *What a Recipe Is* (FPS CT 08 001)
How to Make Recipes Larger and Smaller (FPS CT 08 004)
How to Measure Dry Things (FPS CT 09 001)
How to Measure Liquids (FPS CT 09 002)

Suggested Instructional Procedures

Individual Instruction

If you choose to use this LAP as a self-paced, self-instructional unit, have the student(s) follow the learning steps listed in the LAP, as listed below.

Learning Steps in LAP 5.1b

1. Read and study **Information Sheet 1:** Vocabulary.
2. Complete **Activity 1:** Matching Vocabulary Words. Check your answers.
3. Read and study **Information Sheet 2:** Recipes.
4. Complete **Activity 2A:** Parts of a Recipe. Check your answers.
5. Complete **Activity 2B:** Following a Recipe. Check your answers.
6. Read and study **Information Sheet 3:** Weighing and Measuring.
7. Complete **Activity 3A:** Practice Checklist—Weighing Food Using a Baker's Scale.
8. Complete **Activity 3B:** Practice Checklist—Weighing Food Using a Portion-Control Scale.
9. Complete **Activity 3C:** Practice Checklist—Measuring Solid Ingredients.
10. Complete **Activity 3D:** Practice Checklist—Measuring Liquid Ingredients.
11. Read and study **Information Sheet 4:** Weights and Measures.
12. Complete **Activity 4A:** Abbreviations. Check your answers.
13. Complete **Activity 4B:** Equivalents. Check your answers.
14. Read and study **Information Sheet 5:** Converting Recipes.
15. Complete **Activity 5A:** Increase a Recipe. Check your answers.
16. Complete **Activity 5B:** Decrease a Recipe. Check your answers.
17. Get **Written Test 5.1b** from your instructor and complete it. If you are successful, go on to step 18; if not, talk with your instructor.
18. Have your instructor evaluate you on **Skills Test 5.1b**. If you are successful, you have completed this LAP; if not, talk with your instructor.

Suggested Instructional Procedures (continued)

Group Instruction

If you choose to use this LAP as a unit of instruction for more than one student, the following teaching steps are suggested.

Teaching Steps for LAP 5.1b

1. Discuss the purpose of LAP 5.1b.
2. Discuss the objectives in LAP 5.1b.
3. Discuss the vocabulary words with the group.
4. Introduce the subject of recipes and weighing and measuring.
5. Have the students read the information sheets and do the written activities in the LAP.
6. Demonstrate on the blackboard how to convert recipes. Have the students practice with your assistance.
7. Demonstrate weighing with a baker's scale and a portion-control scale. Have the students practice with your assistance.
8. Demonstrate measuring solid ingredients and liquid ingredients. Have the students practice with your assistance.
9. Discuss abbreviations with the group.
10. Discuss equivalents with the group.
11. Give the students **Written Test 5.1b** to complete. Evaluate it with the Answer Keys in this Instructor's Guide. Make special arrangements for those who do not master this unit.
12. Use the **Skills Test 5.1b** to evaluate each student. Assign students who do not master tasks satisfactorily to practice more in the kitchen with some assistance.
13. Use the additional instructional activities/enrichment with the group or with individual students.

Additional Instructional Activities/Enrichment

Suggested Readings

Haines, Robert G. *Food Preparation for Hotels, Restaurants, and Cafeterias*. 2nd ed. Alsip, Ill.: American Technical Publishers, Inc., 1973, pp. 24-28, 66-67.

Written Test 5.1b

I. Matching Vocabulary Words

Directions

Match each of the vocabulary words below with the correct definition. Write the letter of the correct definition in the blank beside each word.

Vocabulary Words

_____ 1. **yield**

_____ 2. **factor**

_____ 3. **measure**

_____ 4. **standardized**

_____ 5. **abbreviation**

_____ 6. **portion**

_____ 7. **convert**

_____ 8. **equivalent**

_____ 9. **weigh**

_____ 10. **A.P.**

_____ 11. **E.P.**

Definitions

a. The number of portions to be expected from a recipe

b. An equal amount

c. To portion the amount of food by volume (how much) using standard equipment

d. The appearance, weight, quality of food at purchase, before preparation has begun

e. The amount by which you wish to convert a recipe

f. To change, increase, or decrease a recipe

g. A serving of food of a standard size

h. A shortened form of a written word used to save time and space

i. To portion the amount of food by weight (how heavy) using standard equipment

j. Something that produces the same results over and over

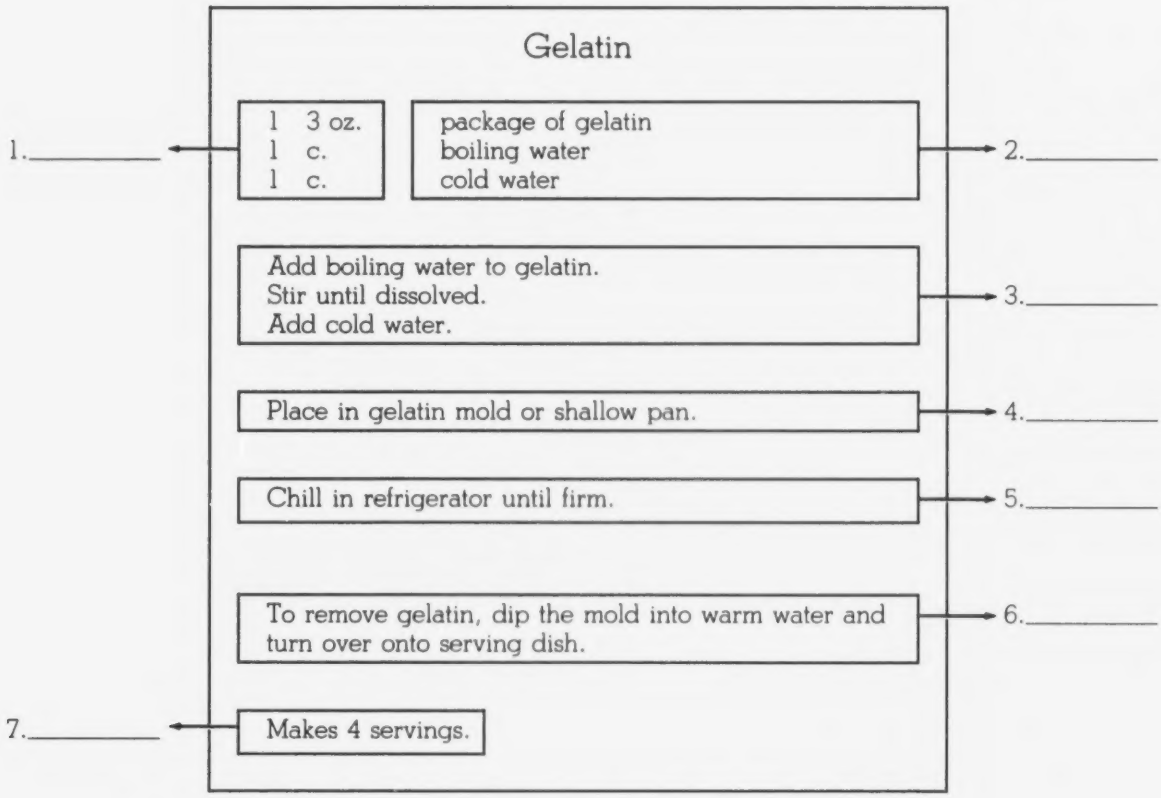
k. Edible portion; food as it is after preparation, allowing for waste and shrinkage

Written Test 5.1b (continued)
II. Parts of a Recipe

Directions

Identify each part of the recipe below. Choose the correct phrase from the Word Bank and write the letter of the phrase in the blank beside the recipe part. (There are more phrases than parts.)

Recipe Parts



Word Bank

a. directions for mixing
b. special instructions
c. weights and measures
d. special equipment
e. factor
f. yield
g. portion
h. method of preparing or cooking
i. ingredients
j. equivalent

Check your answers in the back of the LAP. If you missed any, review Information Sheet 2.

Written Test 5.1b (continued)
III. Following a Recipe

Directions

Arrange this list of steps in following a recipe in the correct order by putting the letter of the step beside the number of the step.

____ Step 1	____ Step 9
____ Step 2	____ Step 10
____ Step 3	____ Step 11
____ Step 4	____ Step 12
____ Step 5	____ Step 13
____ Step 6	____ Step 14
____ Step 7	____ Step 15
____ Step 8	____ Step 16

a. Set your timer, and check your product from time to time until it is completed.

b. Put the mixed ingredients into the pan or dish called for.

c. Follow the directions for cooking or preparing.

d. While you are waiting, put away your ingredients and clean your work space.

e. Read the recipe all the way through carefully.

f. Follow the mixing section of the recipe step by step as it is written. Measure your ingredients carefully.

g. When you have completed the mixing section, check to make sure you have used all of the ingredients and that you have mixed them correctly.

h. Convert the recipe if necessary.

i. Assemble all ingredients.

j. Do a taste test.

k. Do another taste test before you serve the food.

l. Follow the special instructions in the recipe for cooling, garnishing, portioning, or serving, etc.

m. Assemble all equipment and utensils.

n. If using equipment that needs preheating, set it to the desired temperature.

o. Prepare ingredients as necessary.

p. Weigh and measure all ingredients carefully.

Written Test 5.1b (continued)
IV. Abbreviations

Directions

Write the correct weight or measure beside the abbreviation using the words from the Word Bank below. You will need to use some more than once.

_____ = tsp.	_____ = gal.
_____ = bu.	_____ = oz.
_____ = fl. oz.	_____ = lb.
_____ = pch.	_____ = T.
_____ = qt.	_____ = dz.
_____ = c.	_____ = pt.
_____ = Tbsp.	_____ = #
_____ = t.	_____ = pk.
_____ = fg.	_____ = un.

Word Bank

dozen
pound
teaspoon
peck
pint
pinch
tablespoon
cup
few grains
unit
quart
bushel
ounce
gallon
fluid ounce

Written Test 5.1b (continued)
V. Equivalents

Directions

For each weight or measure in the list below, find the equivalent in the Word Bank. Write the correct equivalents in the blank beside each weight or measure.

There are more terms in the Word Bank than blanks to fill in. Use a term from the Word Bank only once.

Weights and Measures

_____ = 1 tablespoon

_____ = 1 cup

_____ = 1 pint

_____ = 1 quart

_____ = 1 gallon

_____ = 1 fluid ounce

_____ = 1 cup (liquid)

_____ = 1 pound

_____ = 1 pound (butter)

Word Bank: Equivalents

3 pints
3 quarts
2 tablespoons
18 weighed ounces
2 pints
8 fluid ounces
3 teaspoons
2 teaspoons
10 tablespoons
4 4-ounce sticks
16 weighed ounces
6 sticks
18 fluid ounces
3 tablespoons
4 quarts
3 cups
2 cups
16 tablespoons

Written Test 5.1b (continued)
VI. Increase a Recipe

Directions

Increase the recipe below to yield 90 servings. Calculate the correct amounts and fill in the chart for all ingredients.

Follow these steps:

1. Find the factor of increase.
2. Change the recipe measurements to equivalents in ounces, tablespoons, or units.
3. Convert the amount of ingredients for 50 into the amount for 90.
4. Change the recipe measurements in tablespoons, ounces, or units into cups and pounds for a recipe for 90 servings.*

Meat Loaf
(Yield 50)

Factor of Increase:

Ingredients	Recipe for 50 Servings	Equivalents oz./Tbsp./un.	Converted to 90 Servings	Recipe for 90 Servings
Bread	1 lb.			
Milk	3 c.			
Onion, chopped	1 c.			
Celery, chopped	1 c.			
Ground beef	8 lbs.			
Salt	1 1/2 Tbsp.			
Worcestershire sauce	2 Tbsp.			
Parsley, chopped	1/4 c.			
Eggs	7 eggs			

*You may use these charts to help you.

If the decimal figure is	use this fraction	of measurement
.00-.09	0	ounce/tablespoon
.10-.29	1/4	ounce/tablespoon
.30-.59	1/2	ounce/tablespoon
.60-.79	3/4	ounce/tablespoon
.80-.99	1	ounce/tablespoon

Number of tablespoons	=	Fraction of cup
4 Tbsp.	=	1/4 cup
8 Tbsp.	=	1/2 c.
12 Tbsp.	=	3/4 c.

Written Test 5.1b (continued)
VII. Decrease a Recipe

Directions

Decrease the recipe below to yield 20 servings. Calculate the correct amounts and fill in the chart for all ingredients.

Follow these steps:

1. Find the factor of decrease.
2. Change the recipe measurements to equivalents in ounces, tablespoons, or units.
3. Convert the amount of ingredients for 50 into the amount for 20.
4. Change the recipe measurements in tablespoons, ounces, or units into cups and pounds for a recipe for 20 servings.*

Meat Loaf
(Yield 50)

Factor of Decrease:

Ingredients	Recipe for 50 Servings	Equivalents oz./Tbsp./un.	Converted to 20 Servings	Recipe for 20 Servings
Bread	1 lb.			
Milk	3 c.			
Onion, chopped	1 c.			
Celery, chopped	1 c.			
Ground beef	8 lbs.			
Salt	1 1/2 Tbsp.			
Worcestershire sauce	2 Tbsp.			
Parsley, chopped	1/4 c.			
Eggs	7 eggs			

*You may use these charts to help you.

If the decimal figure is	use this fraction	of measurement
.00-.09	0	ounce/tablespoon
.10-.29	1/4	ounce/tablespoon
.30-.59	1/2	ounce/tablespoon
.60-.79	3/4	ounce/tablespoon
.80-.99	1	ounce/tablespoon

Number of tablespoons	=	Fraction of cup
4 Tbsp.	=	1/4 cup
8 Tbsp.	=	1/2 c.
12 Tbsp.	=	3/4 c.

Answer Key for Written Test 5.1b

Directions

Each section in Written Test 5.1b covers one objective and therefore should be evaluated separately. Criteria for evaluating each section are suggested below.

I. To master this objective, the student should answer 10 out of 11 correctly.

1. a
2. e
3. c
4. j
5. h
6. g
7. f
8. b
9. i
10. d
11. k

II. To master this objective, the student should answer 6 out of 7 correctly.

1. c
2. i
3. a
4. d
5. h
6. b
7. f

III. To master this objective, the student should answer 14 out of 16 correctly.

Step 1. e
Step 2. h
Step 3. n
Step 4. i
Step 5. m
Step 6. p
Step 7. o
Step 8. f
Step 9. g
Step 10. j
Step 11. b
Step 12. c
Step 13. a
Step 14. d
Step 15. l
Step 16. k

IV. To master this objective, the student should answer all of these items correctly.

teaspoon = tsp.
bushel = bu.
fluid ounces = fl. oz.
pinch = pch.
quart = qt.
cup = c.
tablespoon = Tbsp.
teaspoon = t.
few grains = fg.
gallon = gal.
ounce = oz.
pound = lb.
tablespoon = T.
dozen = dz.
pint = pt.
pound = #
peck = pk.
unit = un.

Answer Key for Written Test 5.1b
(continued)

V. To master this objective, the student should answer 8 out of 9 correctly.

4 quarts = 1 gallon
2 pints = 1 quart
2 tablespoons = 1 fluid ounce
2 cups = 1 pint
8 fluid ounces = 1 cup (liquid)
16 tablespoons = 1 cup
16 weighed ounces = 1 pound
4 sticks = 1 pound (butter)
3 teaspoons = 1 tablespoon

VI. The student should fill in *all* spaces correctly.

Factor of Increase: 1.8

Ingredients	Recipe for 50 Servings	Equivalents oz./Tbsp./un.	Converted to 90 Servings	Recipe for 90 Servings
Bread	1 lb.	16 oz.	28.8 oz.	1 lb. 13 oz.
Milk	3 c.	48 Tbsp.	86.4 Tbsp.	5 1/4 c. 2 1/2 Tbsp.
Onion, chopped	1 c.	16 Tbsp.	28.8 Tbsp.	1 3/4 c. 1 Tbsp.
Celery, chopped	1 c.	16 Tbsp.	28.8 Tbsp.	1 3/4 c. 1 Tbsp.
Ground beef	8 lbs.	128 oz.	230.40 oz.	14 lbs. 6 1/2 oz.
Salt	1 1/2 Tbsp.	1 1/2 Tbsp.	2.7 Tbsp.	2 3/4 Tbsp.
Worcestershire sauce	2 Tbsp.	2 Tbsp.	3.6 Tbsp.	3 3/4 Tbsp.
Parsley, chopped	1/4 c.	4 Tbsp.	7.2 Tbsp.	1/4 c. 3 1/4 Tbsp.
Eggs	7 eggs	7 eggs	12.6 eggs	13 eggs

VII. The student should fill in *all* spaces correctly.

Factor of Decrease: .40

Ingredients	Recipe for 50 Servings	Equivalents oz./Tbsp./un.	Converted to 20 Servings	Recipe for 20 Servings
Bread	1 lb.	16 oz.	6.4 oz.	6 1/2 oz.
Milk	3 c.	48 Tbsp.	19.2 Tbsp.	1 c. 3 1/4 Tbsp.
Onion, chopped	1 c.	16 Tbsp.	6.4 Tbsp.	1/4 c. 2 1/2 Tbsp.
Celery, chopped	1 c.	16 Tbsp.	6.4 Tbsp.	1/4 c. 2 1/2 Tbsp.
Ground beef	8 lbs.	128 oz.	51.2 oz.	3 lb. 3 1/4 Tbsp.
Salt	1 1/2 Tbsp.	1 1/2 Tbsp.	.6 Tbsp.	3/4 Tbsp.
Worcestershire sauce	2 Tbsp.	2 Tbsp.	.8 Tbsp.	1 Tbsp.
Parsley, chopped	1/4 c.	4 Tbsp.	1.6 Tbsp.	1 3/4 Tbsp.
Eggs	7 eggs	7 eggs	2.8 eggs	3 eggs

Skills Test 5.1b
Weighing and Measuring

Student's Name _____ Date _____

The student can:	Yes	No
I. Weight food accurately on a baker's scale.	___	___
II. Weigh food accurately on a portion-control scale.	___	___
III. Measure solid ingredients accurately.	___	___
IV. Measure liquid ingredients accurately.	___	___

State of Florida
Department of Education
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Tallahassee, Florida
Affirmative action/equal opportunity employer

Division of Vocational, Adult, and Community Education

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